The Response of Tree Regeneration to Deer Management in Southwestern CT: A 5 Year Update

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Background:
The towns of Redding and Ridgefield CT began deer hunting on several town preserves in 2006. In 2007 Highstead established forest monitoring plots in these preserves and nearby unhunted properties to document any changes to forest understories resulting from deer management. These plots were resampled for the first time in 2012, and the results are presented here.

Results
From 2007 to 2012, tree seedling ($\geq 30$ cm$<2.5$ cm diameter) density increased in both hunted and unhunted properties (Fig. 1), whereas species richness of tree seedlings (the number of different tree seedlings per plot) changed little from 2007 to 2012 in either management category.

Discussion
These results suggest an overall increase in tree regeneration, but not diversity, during the past 5 years in southwestern CT. The increase in tree regeneration can be interpreted in two different ways. One interpretation is that deer management has had no effect on forests over the past 5 years and that some other unmeasured factor was responsible for an increase in forest regeneration. Another plausible interpretation for the change in forest regeneration is that deer
management did influence tree regeneration in a positive way, but its effect extended to the landscape as a whole and therefore was not detectable at the single property scale. In other words, both hunted and unhunted properties may have benefitted from hunting that took place only on some properties.

**Figure 1.** Five year change in tree seedling density in southwestern CT plots. Thin bars extending above solid bars represent the deviation from the mean among the different plots.
Fig. 2. Five year change in tree species richness in southwestern CT plots. Thin bars extending above solid bars represent the deviation from the mean among the different plots.